

Jeff Alperovich

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Purdue University

M.S. Mechanical Engineering, Dec. 2017

B.S. Mechanical Engineering, Dec. 2015

Engineering

Rooski Innovations, LLC

Owner/Founder May 2015–Present

- Researched customer needs to understand product desires in multiple markets: owners of the Acura NSX, smart-phone users and more
- Performed testing and evaluation to develop desirable and functional products to provide missing conveniences to consumers
- Sourced supplies and equipment for low cost and high quality
- Performed cost analysis to couple with market research to determine product pricing for business growth and consumer satisfaction
- Market and sell multiple products through internet and interpersonal mediums, featuring individual consumer design customization
- Provide design, modeling, and 3D printing consultation services

Fiat Chrysler Automobiles, Auburn Hills, MI

Product Development Intern May 2016–Aug. 2016

- Oversaw projects and union mechanics in the Body Hardware Lab
- Designed fixturing and accompanying test procedures for core development testing of new products designed for future vehicles, working alongside union mechanics to fabricate and construct
- Communicated with suppliers for the purchase of new test equipment, raw materials, and to perform testing
- Developed testing procedures to validate product performance and correlate data to CAE models (DFSS). Initial correlation had 30% error, pushing CAE to refine models
- Handled testing for Body Hardware Lab walk-in jobs
- Updated and modernized lab work and testing procedures
- Assisted board lead to improve lab efficiency through WCM

Additional Leadership & Expertise

Purdue Racquetball Club

Tournament Director, Club President, Advisor Jan. 2013–Present

- Built sport interest at Purdue, reestablishing the club within the Club Sports competitive team organization at Purdue
- Raised over \$10,000 in 2 years to reduce travel costs to club members by writing grants and running 6 fund-raiser tournaments
- Coordinated with 10 universities and over 250 players across the Midwest to host tournaments, including the State Championships, raising sufficient funds for participants to travel subsidized to additional tournaments including Collegiate Nationals
- Established players within the US Racquetball Association to compete in sanctioned tournaments and build relationships
- Managed travel for 20 players to over 16 tournaments

C-Design Lab, Purdue University

Graduate Research/Teaching Assistant May 2015–Present

- Research design principles and methodologies to further understand learning and development processes
- Develop and construct equipment for novel prototyping methods to further the capabilities of rapid, low-fidelity prototyping
- Teach CAD skills to undergraduate students to use as design tools
- Organized and taught the Toy Design course in Mechanical Engineering under the GERI with a focus on embodied interaction
- Research the effects of hands on design and prototyping activities on understanding and learning through changes in student design language, methodologies, and self-efficacy

International evGrand Prix

President, Mechanical Engineering Lead Oct. 2012–May 2014

- Led a team for 2 consecutive years in the design, build, testing, and race phases of the electric go-kart with a 1st place finish.
- Contacted and managed the participation of 22 teams and several contractors to ensure successful event operation featuring 2 races at The Indianapolis Motor Speedway
- Aided in the procurement of 600 new Boston-Power lithium-ion battery blocks to replace all used on Purdue karts
- Collaborated with battery engineers to test cell temperatures for varying discharge rates to determine the requisite cooling
- Considering test data, designed and built 7 aluminum battery enclosures that powered all Purdue karts in a 3 week span of time using Autodesk Inventor as a CAD tool and mills

Languages

- Native Russian speaker taught by Soviet Russian immigrants
- Learned to speak conversational German through coursework
- Learning Hebrew to better communicate with family in Israel

Trades

- Completed projects and home renovations using manual tools and machinery, working with various woods and metals
- Taught to MIG and TIG weld by skilled mechanics

Software

- Proficient in the use of multiple CAD tools: AutoCAD, Autodesk Inventor, Solidworks, Catia, NX, Creo Parametric
- MARS data collection and nCode data analysis softwares